INDEX TO VOLUME XLVI

SUBJECTS

PAGE

Absorption, Selective Reflection and, in the Ultra-Violet Region of the Spectrum. *E. O. Hulburt* 1

Astrographic Catalogue, A Determination of the Galactic Condensation from Certain Zones of the. *Frederick H. Seares* . . 117

Band and Line Spectra of Iodine. *R. W. Wood* and *M. Kimura* . 181

Band Series, The Mathematical Structure of. *Raymond T. Birge* 85

Baxandall's Explanation of an "Abnormal" Solar Spectrum. *George E. Hale* 291

Y Camelopardalis, TT Lyrae and, Light-Curves and Orbital Elements of. *Martha Betz Shapley* 56

Catalogue, Astrographic, A Determination of the Galactic Condensation from Certain Zones of the. *Frederick H. Seares* . 117

Chromium, A Method of Investigating the Stark Effect for Metals, with Results for. *J. A. Anderson* 104

Clusters, Photographic Effective Wave-Lengths of Some Spiral Nebulae and Globular. *Knut Lundmark* and *Bertil Lindblad* 206

Clusters, Studies Based on the Colors and Magnitudes in Stellar. Fifth Paper: Color-Indices for Stars in the Galactic Clouds. *Harlow Shapley* 64

Color-Curve and Light-Elements of W Ursae Majoris. *Harlow Shapley* and *J. Van der Bilt* 281

Color-Indices of Stars in the Galactic Clouds. Studies Based on Colors and Magnitudes in Stellar Clusters. Fifth Paper. *Harlow Shapley* 64

Comet, Halley's, Note on the Southern Tail of, Seen May 17 and 18, 1910. *E. E. Barnard* 83

Communication. *W. S. Eichelberger* 366

Comparator, A New Form of Spectro. *Ralph E. DeLury* . . 219

Displacement of Fraunhofer Lines toward the Red, The Principle of Generalized Relativity and the. *Charles E. St. John* . . 249

Elements, Orbital, of TT Lyrae and Y Camelopardalis, Light-Curves and. *Martha Betz Shapley* 56

Fraunhofer Lines toward the Red, The Principle of Generalized Relativity and the Displacement of. *Charles E. St. John* . 249

Galactic Clouds, Color-Indices of Stars in. Studies Based on Colors and Magnitudes in Stellar Clusters. Fifth Paper. *Harlow Shapley* 64

PAGE

Galactic Condensation, A Determination of the, from Certain Zones of the *Astrographic Catalogue*. *Frederick H. Seares* . . . 117
Glow-Discharge, Effect of a Longitudinal Magnetic Field upon. *R. F. Earhart* and *C. B. Jolliffe* 76
Halley's Comet, Note on the Southern Tail of, Seen May 17 and 18, 1910. *E. E. Barnard* 83
Helium Spectrum, Wave-Lengths of the Stronger Lines of the. *Paul W. Merrill* 357
Hydrogen "Bombs," Solar. *Ferdinand Ellerman* 298
Iodine, Band and Line Spectrum of. *R. W. Wood* and *M. Kimura* 181
Iodine, Zeeman Effect for Complex Lines of. *R. W. Wood* and *M. Kimura* 197
Light-Curves and Orbital Elements of TT Lyrae and Y Camelopardalis. *Martha Betz Shapley* 56
Light-Elements, Color-Curve and, of W Ursae Majoris. *Harlow Shapley* and *J. Van der Bilt* 281
Luminosities and Parallaxes of Five Hundred Stars. First List. *Walter S. Adams* and *A. H. Joy* 313
TT Lyrae and Y Camelopardalis, Light-Curves and Orbital Elements of. *Martha Betz Shapley* 56
Magnetic Field, Effect of a Longitudinal, upon Glow-Discharge. *R. F. Earhart* and *C. B. Jolliffe* 76
Magnitude-Velocity, Relation to Proper Motion of Preferential Motion and of the Progressions of Spectral Class and. *C. D. Perrine* 266
Magnitudes in Stellar Clusters, Studies based on the Colors and. Fifth Paper: Color-Indices for Stars in the Galactic Clouds. *Harlow Shapley* 64
Mathematical Structure of Band Series. *Raymond T. Birge* . . 85
Mercury Line λ 2536, Structure of the. *Lucy Wilson* 340
Metals, A Method of Investigating the Stark Effect for, with Results for Chromium. *J. A. Anderson* 104
Nebulae, Photographs of, with the 60-Inch Reflector 1911–1916. *Francis G. Pease* 24
Nebulae, Planetary, Preliminary Examination of, for Preferential Motion. *C. D. Perrine* 175
Nebulae, Spiral, Photographic Effective Wave-Lengths of Some, and Globular Clusters. *Knut Lundmark* and *Bertil Lindblad* 206
Obscuration in the Stellar Universe, On the Spiral of. A Reply to Mr. F. H. Seares. *H. H. Turner* 226
Obscuration, The Spiral of. Comments on Professor Turner's Reply. *Frederick H. Seares* 232
Orbital Elements of TT Lyrae and Y Camelopardalis, Light-Curves and. *Martha Betz Shapley* 56
Parallaxes of Five Hundred Stars, Luminosities and. First List. *Walter S. Adams* and *A. H. Joy* 313

PAGE

Photo-Electric Cell, The Variation with Time of the Characteristics of a Potassium, as to Sensibility According to Wave-Length. *Herbert E. Ives* 241

Photographic Effective Wave-Lengths of Some Spiral Nebulae and Globular Clusters. *Knut Lundmark* and *Bertil Lindblad* . . . 206

Photographs of Nebulae with the 60-Inch Reflector 1911–1916. *Francis G. Pease* 24

Photometer, A Differential Spectro. *G. A. Shook* 305

Pole-Effect, The Elimination of, from the Source for Secondary Standards of Wave-Length. *Charles E. St. John* and *Harold D. Babcock* 138

Potassium Photo-Electric Cell as to Sensibility According to Wave-Length, The Variation with Time of the Characteristics of a. *Herbert E. Ives* 241

Preferential Motion, Preliminary Examination of the Planetary Nebulae for. *C. D. Perrine* 175

Preferential Motion, Relation to Proper Motion of, and of the Progressions of Spectral Class and Magnitude-Velocity. *C. D. Perrine* 266

Proper Motion, Relation to, of Preferential Motion and of the Progressions of Spectral Class and Magnitude-Velocity. *C. D. Perrine* 266

Radiation of the Sun, On the Temperature and. *Felix Biscoe* . 355

Radiation Visually Perceptible, The Minimum. *Henri Buisson* . 296

Radiation Visually Perceptible, The Minimum. *Prentice Reeves* . 167

Reflection, Selective, and Absorption in the Ultra-Violet Region of the Spectrum. *E. O. Hulburt* 1

Reflector, 60-Inch, Photographs of Nebulae with the, 1911–1916, *Francis G. Pease* 24

Relativity, The Principle of Generalized, and the Displacement of Fraunhofer Lines toward the Red. *Charles E. St. John* . . 249

Reviews:

Liveing, G. D., and Sir J. Dewar. *Collected Papers on Spectroscopy* (Henry Crew) 238

McAdie, Alexander. *The Principles of Aërography* (W. I. Milham) 301

Series, The Mathematical Structure of Band. *Raymond T. Birge* . 85

Solar Hydrogen "Bombs." *Ferdinand Ellerman* 298

Solar Spectrum, Baxandall's Explanation of an "Abnormal." *George E. Hale* 291

Spectra of Iodine, Band and Line. *R. W. Wood* and *M. Kimura* . 181

Spectral Class and Magnitude-Velocity, Relation to Proper Motion of Preferential Motion and of the Progressions of. *C. D. Perrine* 266

Spectro-Comparator, A New Form of. *Ralph E. DeLury* . . . 219

Spectro-Photometer, A Differential. *G. A. Shook* 305

PAGE

Spectrum, Selective Reflection and Absorption in the Ultra-Violet Region of the. *E. O. Hulburt* 1

Spectrum, Solar, Baxandall's Explanation of an "Abnormal." *George E. Hale* 291

Spectrum, Wave-Lengths of the Stronger Lines in the Helium. *Paul W. Merrill* 357

Spiral of Obscuration. Comments on Professor Turner's Reply. *Frederick H. Seares* 232

Spiral of Obscuration in the Stellar Universe. A Reply to Mr. F. H. Seares. *H. H. Turner* 226

Standards of Wave-Length, The Elimination of Pole-Effect from the Source for Secondary. *Charles E. St. John* and *Harold D. Babcock* 138

Stark Effect for Metals, A Method of Investigating the, with Results for Chromium. *J. A. Anderson* 104

Stars, Five Hundred, Luminosities and Parallaxes of. First List. *Walter S. Adams* and *A. H. Joy* 313

Structure of Band Series, The Mathematical. *Raymond T. Birge* . 85

Structure of the Mercury Line λ 2536. *Lucy Wilson* 340

Studies Based on the Colors and Magnitudes in Stellar Clusters. Fifth Paper. *Harlow Shapley* 64

Sun, On the Temperature and Radiation of the. *Felix Biscoe* . 355

Tail of Halley's Comet Seen May 17 and 18, 1910, Note on the Southern. *E. E. Barnard* 83

Temperature and Radiation of the Sun. *Felix Biscoe* 355

Ultra-Violet Region of the Spectrum, Selective Reflection and Absorption in the. *E. O. Hulburt* 1

Universe, On the Spiral of Obscuration in the Stellar. A Reply to Mr. F. H. Seares. *H. H. Turner* 226

W Ursae Majoris, Color-Curve and Light-Elements of. *Harlow Shapley* and *J. Van der Bilt* 281

Variation with Time of the Characteristics of a Potassium Photo-Electric Cell as to Sensibility According to Wave-Length. *Herbert E. Ives* 241

Wave-Length, Secondary Standards of, The Elimination of Pole-Effect from the Source for. *Charles E. St. John* and *Harold D. Babcock* 138

Wave-Length, The Variation with Time of the Characteristics of a Potassium Photo-Electric Cell as to Sensibility According to. *Herbert E. Ives* 241

Wave-Lengths of the Stronger Lines in the Helium Spectrum. *Paul W. Merrill* 357

Wave-Lengths, Photographic Effective, of Some Spiral Nebulae and Globular Clusters. *Knut Lundmark* and *Bertil Lindblad* . . 206

Zeeman-Effect for Complex Lines of Iodine. *R. W. Wood* and *M. Kimura* 197

INDEX TO VOLUME XLVI

AUTHORS

PAGE

ADAMS, WALTER S., and A. H. JOY. The Luminosities and Parallaxes of Five Hundred Stars. First List. 313

ANDERSON, J. A. A Method of Investigating the Stark Effect for Metals, with Results for Chromium 104

BABCOCK, HAROLD D., and CHARLES E. ST. JOHN. The Elimination of Pole-Effect from the Source for Secondary Standards of Wave-Length 138

BARNARD, E. E. Note on the Southern Tail of Halley's Comet Seen May 17 and 18, 1910 83

BIRGE, RAYMOND T. The Mathematical Structure of Band Series 85

BISCOE, FELIX. On the Temperature and Radiation of the Sun . 355

BUISSON, HENRI. The Minimum Radiation Visually Perceptible 296

CREW, HENRY. Review of: *Collected Papers on Spectroscopy*, G. D. Liveing and Sir J. Dewar 238

DELURY, RALPH E. A New Form of Spectro-Comparator . . 219

EARHART, R. F., and C. B. JOLLIFFE. Effect of a Longitudinal Magnetic Field upon Glow-Discharge 76

EICHELBERGER, W. S. Communication 366

ELLERMAN, FERDINAND. Solar Hydrogen "Bombs" 298

HALE, GEORGE E. Baxandall's Explanation of an "Abnormal" Solar Spectrum 291

HULBURT, E. O. Selective Reflection and Absorption in the Ultra-Violet Region of the Spectrum 1

IVES, HERBERT E. The Variation with Time of the Characteristics of a Potassium Photo-Electric Cell as to Sensibility According to Wave-Length 241

JOLLIFFE, C. B., and R. F. EARHART. Effect of a Longitudinal Magnetic Field upon Glow-Discharge 76

JOY, A. H., and WALTER S. ADAMS. The Luminosities and Parallaxes of Five Hundred Stars. First List 313

KIMURA, M., and R. W. WOOD. Band and Line Spectra of Iodine 181

Zeeman-Effect for Complex Lines of Iodine 197

LINDBLAD, BERTIL, and KNUT LUNDMARK. Photographic Effective Wave-Lengths of Some Spiral Nebulae and Globular Clusters . 181

LUNDMARK, KNUT, and BERTIL LINDBLAD. Photographic Effective Wave-Lengths of Some Spiral Nebulae and Globular Clusters 181

PAGE

MERRILL, PAUL W. Wave-Lengths of the Stronger Lines in the Helium Spectrum 357

MILHAM, W. I. Review of: *The Principles of Aërography*, Alexander McAdie 301

PEASE, FRANCIS G. Photographs of Nebulae with the 60-Inch Reflector 1911–1916 24

PERRINE, C. D. Preliminary Examination of the Planetary Nebulae for Preferential Motion 175

Relation to Proper Motion of Preferential Motion and of the Progressions of Spectral Class and Magnitude-Velocity . . 266

REEVES, PRENTICE. The Minimum Radiation Visually Perceptible 167

ST. JOHN, CHARLES E. The Principle of Generalized Relativity and the Displacement of Fraunhofer Lines toward the Red . 249

ST. JOHN, CHARLES E., and HAROLD D. BABCOCK. The Elimination of Pole-Effect from the Source for Secondary Standards of Wave-Length 138

SEARES, FREDERICK H. A Determination of the Galactic Condensation from Certain Zones of the *Astrographic Catalogue* . . 117

The Spiral of Obscuration. Comments on Professor Turner's Reply 232

SHAPLEY, HARLOW. Studies Based on the Colors and Magnitudes in Stellar Clusters. Fifth Paper: Color-Indices of Stars in the Galactic Clouds 64

SHAPLEY, HARLOW, and J. VAN DER BILT. Notes on the Color-Curve and Light-Elements of W Ursae Majoris 281

SHAPLEY, MARTHA BETZ. Light-Curves and Orbital Elements of TT Lyrae and Y Camelopardalis 56

SHOOK, G. A. A Differential Spectro-Photometer 305

TURNER, H. H. On the Spiral of Obscuration in the Stellar Universe. A Reply to Mr. F. H. Seares 226

VAN DER BILT, J., and HARLOW SHAPLEY. Notes on the Color-Curve and Light-Elements of W Ursae Majoris 281

WILSON, LUCY. The Structure of the Mercury Line λ 2536 . . 340

WOOD, R. W., and M. KIMURA. Band and Line Spectra of Iodine 181

Zeeman-Effect for Complex Lines of Iodine 197